

I cannot find out to what this applies. The specimen was about eighteen inches long. As I have already said, the fish that comes the nearest to it is the *Atractosteus spatula* of Lacepede; much better figured by Aug. Dumins in his *Histoire Naturelle des Poissons*, vol. II., p. 361, pl. 24, fig. 7.

In our present knowledge of this singular fish, some inconvenience might arise from giving it a significant name; and I think it is preferable to design it under the mysterious historical one of *Ompax*. The species will bear the name of *spatuloides*.

It is much to be desired that some specimens will soon be found and secured for one of the Australian Museums.

Ompax, by its extraordinary snout, comes also near *Polyodon*, of which one species is found in the Mississippi, and another in the great Chinese river, the Yantsekiang; but these have their body naked, and cannot properly be placed with the *ganoids*.

It is singular, but almost certain, that the teeth of *Polyodon* fall before the fish acquires its full size.

On a species of AMPHISILE from the Palau Islands.

By WILLIAM MACLEAY, F.L.S., &c.

Plate 19 B.

The very remarkable fish described in this paper, and figured on plate 19 B, was taken by Baron Macleay at a place named "Komis" near the village of "Maleggiok" on the Island of "Babelstaub" one of the Palau Archipelago.

It is found abundantly on the sandy beaches of that island at low tide, but does not seem to be used by the natives for any purpose but that of ornament in their houses.

The specimen from which the description and drawing are taken, is dry, but I believe it is not changed to any great degree from what it was in a fresh condition.

The fish belongs to the curious family of *Centriscidæ*, and in the form and structure of the head resembles much the *Fistularidæ* or Pipe Fishes.

The genus *Amphisile*, to which this species belongs, is especially remarkable for a strong bony cuirass covering the entire back and extending beyond the tail; turning the hinder part of the trunk and the tail downwards in an almost vertical direction, thus making the dorsal fins appear to be on the lower surface of the tail.

At Baron Maclay's request I give the species from the locality of its capture, the name of

AMPHISILE KOMIS.

General form elongate, very compressed, tapering in front to the extremity of the snout, and behind to the 1st dorsal spine, swelling out in the middle both above and below in a very gentle curve and slightly curving upwards at each extremity. The width is greatest along the middle of the sides where there is a ridge, represented in the vertical section—fig. a. b. The snout from the eye is twice as long as the height of the body at its deepest part, and one-fourth of the total length from the mouth to the extremity of the 1st dorsal spine, it is compressed, tapers to a very minute mouth, and excepting towards the eye where it is of the same bony punctato-striate substance as the crown of the head, its integuments are transparent. The nostrils are immediately in front of the eyes, the anterior one rather large. The orbits are rather large and about their diameter apart with a distinct ridge round them, and a short ridge in front, extending from near the nostril downwards. The upper part of the head is hard and punctato-striate, and may be looked upon as a mere continuation of the body cuirass—this bony part commences in a very narrow strip near the mouth, and extends along the summit of the snout, gradually widening until it joins the first dorsal plate. On the vertex between the eyes there is a very slight longitudinal depression. Below the eye a blunt spine or process extends downwards into the transparent ventral membrane.

The operculum is scarcely longer than high, convex, punctate, rounded behind, and angular beneath, the distance of its posterior margin from the root of the pectoral fin being much greater than its distance from the anterior margin of the orbit.

The humerus is large and of somewhat triangular shape, the posterior angle extending to the upper part of the origin of the pectoral fin, while beneath on the anterior portion there is a broad notch to receive the upper part of the coracoid bone. This bone is nearly square, with an oblique groove in the middle.

The dorsal cuirass extends on the back from the head, to which it is firmly fixed, the suture being rigid and dovetailed, in one apparent piece (*) to about one-fifth the entire length of the fish beyond the tail; it becomes gradually smaller towards the extremity, and has articulated to its apex, running in the same direction a spine of about half an inch in length, to which I give the name of the first dorsal spine.

The whole of this part of the cuirass is longitudinally striate, and for the most part punctate. The lateral portion of the cuirass seems to consist of four plates, closely adherent to the dorsal part just mentioned, (the suture being scarcely visible) and extending downwards along the middle of the body as far as the middle of the sides. The first plate is narrow from its contact with the head and operculum, until past the humerus and pectoral fin, where it expands downwards to the middle of the body; the second plate is shorter than the first, rather longer than deep, and quite rectangular; the third is about the same length as the second, but becomes less deep towards the fourth; this last runs out entirely into the dorsal portion above the tail. The lateral sutures of these plates are deeply serrated, the serrations dovetailing in the most perfect way. These lateral plates, or at least three of them, have a fan-shaped series of fine striae, expanding downwards from a nucleus near the dorsal suture. The body below these lateral plates is covered with a perfectly transparent membrane, through which ten pairs of ribs are visible, and terminates beneath in a very trenchant edge which extends from the snout to the vent.

The pectoral fins are of moderate size, situated much nearer to the ventral fin than to the eyes, and consist of eleven rays of nearly uniform length. The ventral fin, for there is only one, is

* Dr. Gunther, in his description of *A. scutata*, speaks of this part as consisting of five bones.

abdominal, taking its rise in a deep notch of the sharp ventral edge, about opposite the middle of the second plate of the cuirass, much nearer to the anal fin than to the eye, and consists of four rays, the two longest quite four lines in length. The other fins are close together, and much of a size, the anal consisting of ten rays, about the length of those of the ventral; the caudal in the same plane on a tail pointing downwards, and only a little free from the body, of ten rays. The soft dorsal close behind and in the same plane, of ten rays, gradually lengthening backwards, or towards the first rays, according to the method of reckoning in fishes of normal form.

The spinous dorsal consists, in addition to the articulated continuation of the dorsal cuirass already mentioned, of a short strong spine pointing downwards and backwards from the under side of the extremity of the dorsal cuirass, and connected by a very small membrane with the first spine, and of two others, considerably larger and near the soft dorsal, of a slightly curved and flattened shape and unequal size: the one nearest the soft dorsal being the smallest, connected together by a membrane to the apex, and also connected by a long but low membrane with the second spine.

The color seems to have been yellowish or yellowish brown for the most part, on the hard parts, all the rest seems to have been transparent; the dark mark along the middle of the body is probably due to the course of the alimentary canal showing through the integuments.

The length of the fish is five inches, the figure given in plate 19B being the exact dimensions, and I believe it is the full adult size. The specimen I suppose to be a male, as in another species, Kner seems to have found the prolongation of two rays in the ventral fin, an indication of the sex.

Three species of *Amphisila* are recorded in Dr. Gunther's admirable Catalogue of Fishes. *A. scutata*, *punctulata*, and *strigata*; of these, the last, a species described and named by that distinguished Ichthyologist himself is the only one which can be suspected of being identical with the present species. But the differences are many and important. The following are some of

the main points of difference. The interorbital space has a slight longitudinal groove, the operculum is not longer than deep, and has an angular protuberance beneath, the distance from the posterior margin of the operculum to the root of the pectoral is much greater than to the anterior margin of the orbit, there is no black longitudinal band, and the lateral plates of the cuirass differ both in size and number. According to my estimate also there is a considerable difference in the formula of the fins, that of *A. strigata* Gunth. being D. $\frac{3}{10}$, A. 12, C. 10, P. 12, V. 4, while that of the present species is D. $\frac{4}{10}$, A. 10, C. 10, P. 11, V. 4.

ON MACRODONTISM.

BY N. DE MIKLUCHO-MACLAY, Hon. Memb. Linn. Soc. N. S. W.

Plate 18.

The copy in "Nature" (Vol. XVI., No. 404) of the sketch of an Islander of Tauï*, which I had sent in 1876 to Professor R. Virchow in Berlin, is such a perfect caricature that I am induced, in consideration of the great anthropological interest of the subject, to lay before the Society a correct lithograph of my original sketch, with some remarks on this peculiarity, which I shall call *Macrodontism* (μακροδοντισμός).

I commence with an extract from my first letter on this subject to Professor Virchow, which has been kindly translated into English by Mr. C. L. Sahl, Imperial German Consul in Sydney.

"15 June, 1876.

"Archipelago Ninigo (or Echiquier),

"1° 23' south lat., 144 east long.

"Going south after my visit to Western Mikronesia, I came to the Admiralty Islands, which are as yet little known. I continued there my anthropological studies, and devoted my attention to an important anatomical peculiarity of the natives (who belong to the Melanesian Race) and obtained some unexpected

* Tauï or Admiralty Islands.